Chapter Three: Airport Role Analysis

The previous chapter of the Utah Continuous Airport System Plan (UCASP) provided a summary of existing airport facilities, activity levels, and socioeconomic conditions in each airport's service area. This information forms the backbone of the UCASP since subsequent analysis is based upon existing conditions and the data presented in Chapter 2. This chapter continues development of the UCASP by evaluating the roles of Utah's airports. When established, these roles will be used to evaluate the effectiveness of Utah's existing airport system and determine if improvements are needed.

Airport roles are defined differently from a national, state, and local perspective. Historically, Utah has used service levels established by the FAA in the National Plan of Integrated Airport Systems (NPIAS) to define each Utah system airport's role. As a national plan, the NPIAS is used by the FAA to identify aviation facilities of significance to the national air transportation network. The NPIAS defines an airport's role by its service level, and the airport's service level reflects the type of service the airport provides to the nation, state and local community. The service level also reflects the funding categories established by Congress to assist in airport development.

As noted in the previous chapter, the service levels used by the NPIAS include the following:

- **Primary (PR)** - Primary airports are public use airports receiving scheduled airline passenger service, enplaning 10,000 or more passengers per year.
- **Commercial Service (CM**) - Commercial Service airports are public use airports which receive scheduled airline passenger service and which enplane 2,500 or more passengers annually.
- **Reliever (RL) -** Reliever airports are general aviation or commercial service airports which serve to relieve congestion for a Primary airport by providing general aviation and non-airline commercial operators with another access to the community.
- **General Aviation (GA) -** General Aviation airports are either publicly or privately owned public use airports that primarily serve general aviation users.

The NPIAS for years 2007-2011 includes 34 of the 47 airports in the Utah Airport System. The service level classification of these 34 airports includes three Primary, four Commercial Service, three Reliever, and 24 General Aviation airports.   The NPIAS service level for each Utah airport was presented in the previous chapter.

While these service levels are useful to the FAA in making funding decisions, they do not adequately describe the function or role of each airport in the Utah State System, especially those in the General Aviation category.   The 25 Utah General Aviation airports do not serve the same function or role, nor should they be designed to do so.

These airports have varying levels of activity, facilities, and services and meet a wide variety of needs. Some General Aviation airports are used extensively by large business-class aircraft, others are used primarily by small aircraft for recreational purposes, and others are used for emergency medical air transport. The FAA's NPIAS service levels do not relate to the manner in which airports function within the state system. Inclusion in NPIAS simply means that an airport has some national significance and is eligible to receive FAA Airport Improvement Program (AIP) grants. The NPIAS service level classification provides little guidance on the types of facilities that should be developed and/or maintained to meet other functions. Both federal and state funding for airport improvements is extremely limited; therefore, it is essential that airports in Utah be developed to the extent necessary to perform their identified roles, and that state funding be applied in a manner to support these roles.

Typically, state-specific roles are developed through consideration of many different factors including geography, demographic characteristics, economic development potential, and the demand for aviation services. The combination of these factors determines the role that each airport plays within a defined system, such as the Utah Airport System. The Utah-specific roles developed in this chapter are tools for use by the Utah Division of Aeronautics (UDOA) and airport sponsors for long-term planning and evaluation of the performance of Utah's Airport System. These roles supplement rather than replace the FAA NPIAS service levels and provide a broader opportunity to view the state's airport system in its full context.

AIRPORT ROLE CONSIDERATIONS

There are many factors that can be considered in the development of state-specific airport roles. Typically the factors are selected in response to the goals established for an airport system. Certainly, airports and airport systems must be developed to meet certain basic goals, such as serving transportation needs, but there are also other important goals that can be achieved through the development of an effective airport system.
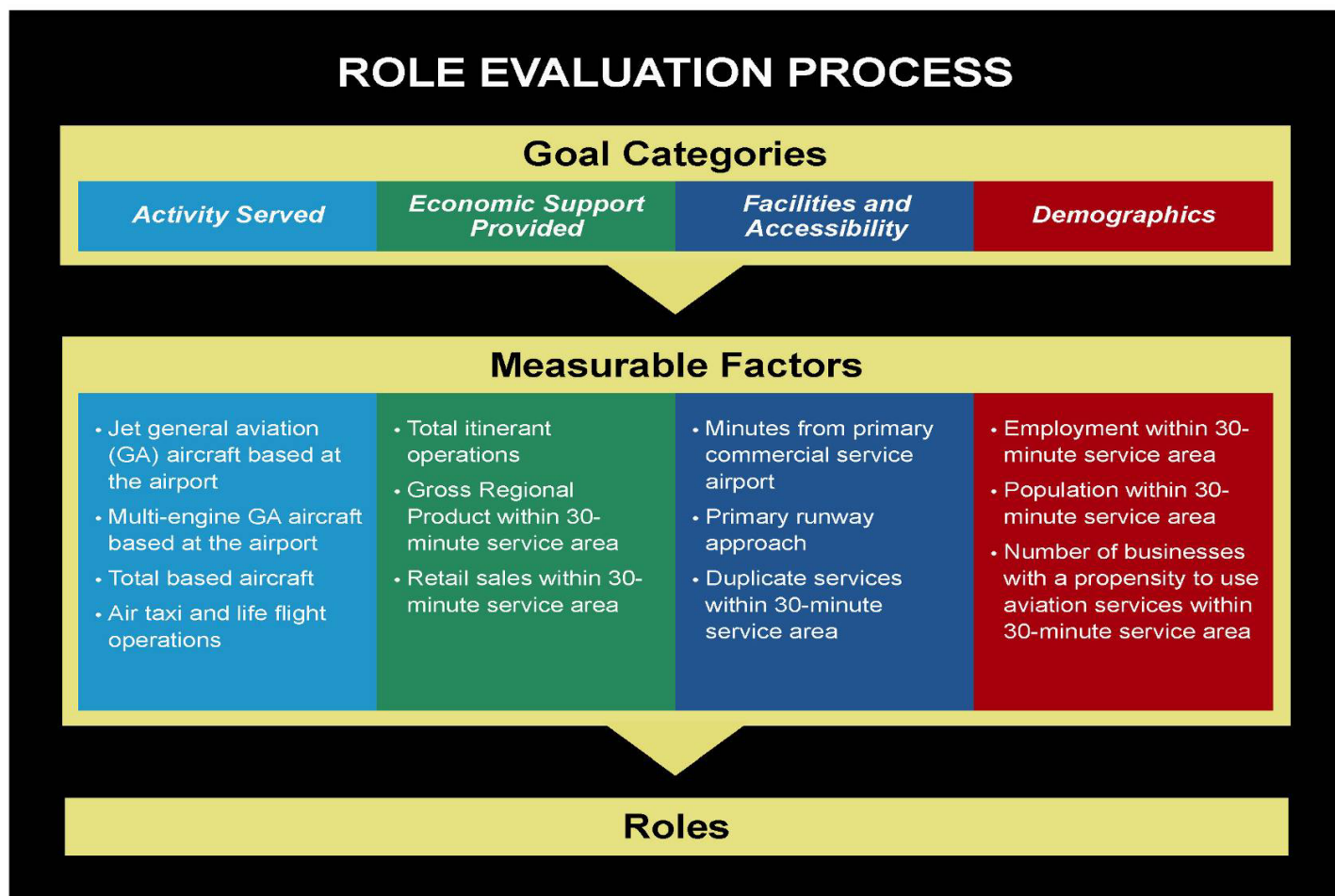
Goals that are important to the development of an effective state airport system include the following:

- Provide airports with adequate facilities and services to serve the existing and projected levels of aviation activity or demand
- Provide economic support to regional, and local businesses by developing airports that provide sufficient access to the national air transportation system
- Provide facilities that are accessible from the ground and air to meet the demands of users
- Provide airports to serve population and economic centers

These goals, summarized as goal categories, were used in the process to identify specific measurable factors that influence the role an airport performs within the system.

Exhibit 3-1 depicts the process in which the goal categories were related to specific measurable factors, which are discussed in more detail in a subsequent section of this chapter. The resulting measures were then used to determine the roles of airports within the existing Utah Airport System.

Exhibit 3-1
Role Evaluation Process

ROLE EVALUATION PROCESS

Goal Categories

Activity Served	*Economic Support Provided*	*Facilities and Accessibility*	*Demographics*

Measurable Factors

• Jet general aviation (GA) aircraft based at the airport • Multi-engine GA aircraft based at the airport • Total based aircraft • Air taxi and life flight operations	• Total itinerant operations • Gross Regional Product within 30-minute service area • Retail sales within 30-minute service area	• Minutes from primary commercial service airport • Primary runway approach • Duplicate services within 30-minute service area	• Employment within 30-minute service area • Population within 30-minute service area • Number of businesses with a propensity to use aviation services within 30-minute service area

Roles

Measurable Factors

Through extensive discussion with the Technical Advisory Committee, review of other comparable statewide airport systems, and analysis of available data, specific measurable factors were selected to evaluate the role of each airport in the Utah Airport System. These measurable factors were chosen because they are the most significant determinants in establishing the role or function of an airport within the System. By using factors that are measurable, the determination of roles becomes a quantitative process rather than a subjective, qualitative process.

The following summarizes the measurable factors used within the four goal categories previously identified:

Activity Served
- Jet GA aircraft based at the airport
- Multi-engine GA aircraft based at the airport
- Total based aircraft
- Air taxi and life flight operations

Economic Support Provided
- Total itinerant operations
- Gross Regional Product within 30-minute service area
- Retail sales within 30-minute service area

Facilities and Accessibility
- Minutes from primary commercial service airport
- Primary runway approach
- Duplicate services within 30-minute service area

Demographics
- Employment within 30-minute service area
- Population within 30-minute service area
- Number of businesses with a propensity to use aviation services within 30-minute service area

In general terms, each airport was scored separately for each measurable factor. The maximum score for each airport for each measurable factor was 10, with the scores for each airport stratified based on the range of data identified for each factor. For example, in some cases data were numeric and a statistical method could be used to assign scores. This is true for based aircraft. For other factors, the data were limited to only several choices. For example, the type of approach to the runway was defined as visual, non-precision, or precision. Therefore, each measurable factor was analyzed separately to determine the appropriate scoring process. The scoring process and data analyzed for each factor is discussed below.

It is important to note that for purposes of the 30-minute service area evaluations, Geographic Information System (GIS) analyses were completed to determine the drive time, or service area, for each system airport. A service area of 30 minutes was chosen to correspond to the FAA's use of 30-minute drive times in its determination of eligibility for airports in the NPIAS.

A base map of Utah's road system was obtained from Environmental Systems Research Institute (ESRI) *Data and Maps 2007* for use in the GIS analysis. The quantity and quality of the roads leading to each airport was considered in the GIS analysis, and

associated speed limits were assigned based on the type of road (primary highway, secondary or connecting road, or local/rural road). Using posted speed limits and road network, a 30-minute service area was developed for each of Utah's airports.

The measurable factors within each goal category are discussed below. Specific sources for the data and the range of data results for each measurable factor are also provided.

Activity Served

Airports were evaluated based on the levels and types of aviation activities currently served at each facility. In general, an airport's total number of based aircraft and the number of based multi-engine and jet aircraft provide an indication of the role that the airport plays. Given the rural nature of much of Utah, use of the airport by medical flight operators is one of the most important indicators of an airport's role. Within the activity served goal, the following factors were measured and rated for each system airport:

Jet GA aircraft based at the airport – Airports were rated based on the number of based GA jets identified in the airport inventory conducted as part of the study. The presence of based jet aircraft at an airport indicates that the airport probably has high activity levels and significant demand for aviation services because these aircraft require high service levels and are typically used for business activities. Salt Lake City International has the most based GA jet aircraft with a total of 17. Numerous Utah airports have no based GA jet aircraft. Scores were assigned to each airport based on the total number of based GA jet aircraft, with the highest score being a 10. Airports with based GA jet aircraft between 1 and 17 were given a score relative to the range of data. Airports with no based jet aircraft were given a score of 0.
Source: Airport inventory form, UDOA

Multi-engine GA aircraft based at the airport – Airports were rated based on the number of based multi-engine aircraft identified in the airport inventory effort conducted as part of the study. Similar to based GA jet aircraft, multi-engine GA based aircraft also indicate that the airport is supporting higher activity levels by more sophisticated aircraft. Salt Lake City International also has the highest number of based multi-engine GA aircraft with 69, followed by Ogden-Hinckley Municipal with 34. Numerous Utah airports have no based multi-engine aircraft. Airports were scored from 0 to 10, using a statistically valid process to relate the range of data (in this case based multi-engine aircraft) to the available scores (0 to 10). Airports with no based multi-engine GA aircraft were given a score of 0.
Source: Airport inventory form, UDOA

Total based aircraft – Airports were rated based on the total number of permanently based aircraft identified in the airport inventory effort conducted as part of the study. The number of total based aircraft at an airport typically correlates to the level of

activity experienced, whether by small recreational aircraft or large aircraft. Total based aircraft can easily be measured at an airport for an accurate count. Salt Lake City International had the highest number of total based aircraft at Utah airports with 322, followed by 292 at Ogden-Hinckley Municipal. There were a total of 2,326 based aircraft in Utah when the inventory was conducted in December 2006. A statistically valid process was used to correlate total based aircraft to the range of scores from 0 at several airports that had no based aircraft, to 10 at airports that had over 100 based aircraft.
Source: Airport inventory form, UDOA

Air taxi and medical flight operations – Airports were rated based on the total number of air taxi and medical flight operations identified by UDOA as part of this study effort. The total number of air taxi and medical flight operations is considered an important factor in the evaluation of the type of activity served in a state such as Utah, because of the many rural and isolated areas where this type of activity is critical. Each life flight was given a weighting to represent the importance of life flight in comparison to air taxi operations. In 2006, the total air taxi and life flight operations ranged from 10,411 at Salt Lake City International, followed by 1,582 at Provo Municipal, to 5 at Junction. Scores ranged from 1 at many airports to 10 at five airports that had the highest levels of life flight and air taxi activity.
Source: UDOA, IHC Life Flight, University of Utah Air Med

Economics
Airports in Utah are vital to the economy. As a result of the important role that airports in Utah play in supporting and leading economic growth, it is imperative examine factors that could help establish the role that each airport has in supporting the state's economy. The following factors were considered in the economics goal category:

Total itinerant operations – The total number of itinerant operations is considered to be an indicator of economic activity in an area since the area attracts aviation users from outside the local region. The total number of itinerant operations for 2006 was obtained from UDOA as part of the inventory effort for this study. Total itinerant operations ranged from 450,500 at Salt Lake City International (which includes commercial airline flights), followed by 62,197 at Provo Municipal, to 230 at Junction. Scores ranged from 1 at many airports with less than 2,500 itinerant operations to 10 at airports with more than 20,000 itinerant operations.
Source: UDOA

Gross Regional Product (GRP) within 30-minute service area – Using the 30-minute service areas defined above, the GRP within each service area was calculated. GRP is defined as the market value of all goods and services produced within a specific area over a given period of time. Areas with higher GRP are assumed to represent areas with higher economic activity, indicating a potential for greater demand of aviation services. GRP data for the year 2005 was obtained from the U.S. Department of Commerce for each county in Utah. Because the data is only

available at the county level, correlation of GRP data to population by Census block group was necessary to provide a more detailed analysis within each airport's service area. The GRP data was evaluated to assign proportionate economic value to each service area. GRP by service area ranged from $49.8 billion for Skypark to approximately $627,100 at Halls Crossing. Airport service areas with less than $1.0 billion in GRP were given a rating of 1, while airport service areas with a GRP of over $11.0 billion were given a rating of 10.
Source: ESRI Data & Maps 2007, U.S. Department of Commerce

Retail Sales within a 30-minute service area – Similar to GRP, retail sales data were evaluated for each airport's 30-minute service area and evaluated using the same methodology. Data were collected on total retail sales by county for fiscal year 2005. Retail sales indicate economic activity as a whole within the county, considering both local and non-local sales. In areas where there are limited retail opportunities people must travel beyond their local community to a nearby community to make retail purchases. This measure indicates the demand for services in a specific community. Retail sales by service area ranged from $17.5 billion for Skypark to approximately $141,400 at Halls Crossing. Airport service areas with less than $500.0 million in retail sales were given a rating of 1, while airport service areas with retail sales of more than $6.0 billion were given a rating of 10.
Source: ESRI Data & Maps 2007, Woods and Poole Inc., 2006 (socioeconomic data)

Facilities and Accessibility
Airports were also rated based on their physical facilities and accessibility. Airports with instrument approach capabilities, precision or non-precision, have greater accessibility and tend to play more essential roles within the airport system. This is even more important when the communities are located farther away from airports that provide equal or better access, including commercial airline service. The following factors were measured for the facilities and accessibility goal category:

Minutes from a Primary Airport – The proximity of each Utah airport to those classified by the FAA as Primary Airports (Commercial Service Airport with more than 10,000 annual enplanements) was evaluated. Primary airports typically serve a larger service area simply because of the more robust facilities and services available, including commercial airline service. The more distant an airport is from a Primary Airport, the more need there is for higher level facilities and services to accommodate more sophisticated general aviation activity. Using GIS analysis, the distance in minutes from each airport to the nearest Primary Airport was calculated. The analysis extended beyond the Utah borders to consider such airports located in neighboring states. Those airports that were further away were given a higher score than those that are closer to a Primary Airport. Halls Crossing is located the most distant from any Primary Airport, and has a 277-minute drive time to reach a Primary Airport facility. All existing Primary Airports received a score of 0 since they serve as the measurement point.
Source: Wilbur Smith Associates, ESRI Data & Maps 2007

<u>Primary runway approach</u> – Airports were evaluated on the basis of the most significant approach published for the primary runway at the airport. The standard approach classifications of precision, non-precision, and visual were used for this evaluation. For this analysis, airports with a precision approach were scored highest with a score of 7, airports with a non-precision approach were given a score of 3, and those with a visual approach were given a score of 1. Only four of Utah's airports were noted to have precision approaches.
Source: FAA U.S. Terminal Procedures, Wilbur Smith Associates

<u>Duplicate services within 30-minute service area</u> – Utah's system of airports is diverse; however, when analyzed as a whole, the 30-minute service areas of individual airports sometimes overlap. These overlapping service areas indicate duplication of accessibility and services. Airports with little or no duplication of service provide that community with access to only one aviation facility. Those airports that serve as an FAA-designated reliever airport were not included or considered to have duplicate services, since their role is to relieve larger commercial airports. These airports must be located in the same metropolitan area in order to serve this function. For this factor, airports were rated on whether they had no duplication (score of 10), duplication with one airport (score of 5), or duplication with two or more airports (score of 0). More than 25 of Utah's airports have no overlap in service areas. Along the Wasatch Front, but also in other areas of the state, three airports have significant overlaps with more than two other airports.
Source: Wilbur Smith Associates, ESRI Data & Maps 2007

Demographics
Demand for aviation is typically correlated with demographic factors such as population and employment. Areas with higher population and employment typically require higher levels of aviation facilities to serve the resulting economy. In terms of employment, the types of businesses in an area can have a significant impact on the level of aviation services needed to service a particular area of the state. Based on extensive analysis, the types of businesses that have the propensity to use aviation can be located to determine where high concentrations exist. The following factors in the demographics goal category were measured in the process:

<u>Employment within 30-minute service area</u> – The employment levels in each airport service area represent the number of potential businesses that could rely on aviation, either as a user or as a business that is reliant on business travelers or tourists visiting their location. Businesses also utilize aviation services such as air cargo to transport goods or packages. Employment data were obtained from Woods and Poole, and similar to other GIS analyses, were assigned to block group level Census data for analysis of each 30-minute service area. This data was analyzed to proportionately assign appropriate employment statistics to each service area. Employment data for each service area ranged from nearly 623,500 employees near Skypark to less than 20 employees near Halls Crossing. Those service areas with employment less than 20,000 were given a rating of 1, while

those with employment greater than 300,000 were given a rating of 10.
Source: Woods and Poole, 2006 (socioeconomic data), Wilbur Smith Associates

Population within 30-minute service area – The current population in the service area of an airport represents the number of potential aviation users for the airport. The same process used to evaluate employment within each 30-minute service area was utilized to evaluate population in the airport service area. Population within a 30-minute drive ranged from over 1.3 million for Skypark to 41 at Halls Crossing. Service areas with a population of less than 30,000 were given a rating of 1, while service areas with a population of greater than 300,000 were given a rating of 10.
Source: Woods and Poole, 2006 (socioeconomic data), Wilbur Smith Associates

Number of businesses with propensity to use aviation services within 30-minute service area – Throughout Utah, the number of businesses that have the propensity to use aviation services were located through use of a business listing company. The business types selected were based on detailed analysis of the results of business surveys conducted by Wilbur Smith Associates over the past 10 years. The business listing company compiled the data for these business types which were located in the GIS analysis. The 30-minute service areas for each airport were overlaid on the GIS mapping to determine the number of businesses within the area that have the propensity to use aviation services. The more businesses with the propensity to use aviation services within each airport's service area, the higher the rating. This measure ranged from over 1,350 for Skypark to zero for several System airports. The scoring ranged from 0 for those with no identified businesses to 10 for those service areas with more than 500 businesses identified as having the propensity to use aviation services.
Source: InfoUSA, 2006, Wilbur Smith Associates

Weight Assignment for Goal Categories

Through discussion with UDOA staff, it was determined that all four of the goal categories were not of equal importance in the evaluation of each airport's role in the Utah Airport System. To reflect the importance of a goal category, weights were assigned to each goal category. The scores for the measurable factors within each category were summed. Airports with a higher score reflect a more important role in the system.

The four goal categories were scored from high to low, and are presented in this in order as follows:

- Demographics
- Activity Served
- Economic Support Provided
- Facilities and Accessibility

Results of Evaluation

The measurable factor scores for each goal category were summed to determine each airport's initial score, prior to weighting. The sum of the category scores for each airport, including the weight, produced the results of the role evaluation. The final scores for all airports were evaluated to determine where natural breaks in the scoring process occurred. These natural breaks were used to separate the airports into categories for role assignment.

With the airports scored based on the goal categories and measurable factors, the number of roles for the Utah Airport System was considered next. Roles are needed to determine the facility and service standards that should be used to evaluate the adequacy of Utah's Airport System and how the system is functioning to meet its objectives.

As previously noted, the FAA no longer uses a standard classification system other than the delineation between commercial airports and general aviation airports. To further classify airports, especially as they relate to design, the FAA groups airports based on the type of aircraft that regularly operate at the airport. This classification system is referred to as Airport Reference Codes (ARCs). This system is discussed in more detail in a subsequent section.

To develop a role for each airport, based on the results of the analysis, the airport scores were reviewed. Airports were separated into five tiers based on the number of standard deviations above or below their respective scores relative to the average score. Definitions for the five roles were developed based on a review of other state system plans and the FAA system. The five roles serve as the baseline, with possible refinement as the evaluation of the system is conducted in later tasks. The five roles are identified in the following section.

AIRPORT ROLE DEFINITIONS

Based on a review of other state aviation and FAA classifications, as well as the roles the airports play in Utah's airport system, five airport roles were developed. The five UCASP airport roles are defined as follows:

- **International Airports:** serve domestic and international commercial airlines
- **National Airports:** serve commercial airlines and classified by FAA as Primary Commercial Service
- **GA-Regional Airports:** serve wide range of large GA aircraft users
- **GA-Community Airports:** serve smaller GA aircraft and local business activities
- **GA-Local Airports:** serve limited GA functions, including emergency and recreational use, in smaller communities and remote areas

Table 3-1 lists airports alphabetically by the name of the associated city and classifies each into one of the five roles listed above. **Exhibit 3-2** presents the information graphically with the five roles for Utah's aviation system. This represents the initial airport roles that will be used as a baseline for analysis of the system. More detailed definitions are provided below as they relate specifically to Utah's Airport System.

International – International Airports (International) serve a significant national, state and local role. In terms of the Utah Airport System, International Airports provide a conduit to the global economy and essential commercial airline access to the region. Only one airport in Utah currently serves this role in providing access to global markets and serving domestic and international commercial airlines. The significance of this service and the ability of this airport to accommodate the highest level of commercial service and general aviation activity are of utmost importance to the entire state. This airport serves the largest population center in the state, but is utilized by aviation providers throughout Utah and the world.

National – National Airports (National) enable the local, regional, and statewide economies to have access to and from the national and global economy. All Primary Airports (except for the single International Airport) are included within this role. National Airports accommodate a high level of commercial service and general aviation activity and serve major population centers or tourism destinations in the state.

General Aviation Regional – General Aviation Regional Airports (GA Regional) serve and support the local and regional economies and connect them to the state and national economies. Regional airports serve primarily general aviation activity, with a focus on serving business activity including jet and multi-engine aircraft. FAA Reliever airports are categorized as Regional. These airports support the system of International and National airports and should provide significant coverage to the state's population.

Table 3-1
Initial Airport Role Summary

Associated City	Airport Name	FAA ID	UCASP Role	FAA Role
International Airports				
Salt Lake City	Salt Lake City International	SLC	International	PR
National Airports				
St George	St George Municipal	SGU	National	PR
Wendover	Wendover	ENV	National	PR
Regional Airports				
Bountiful	Skypark	BTF	Regional	GA non-NPIAS
Brigham City	Brigham City Municipal	BMC	Regional	GA
Cedar City	Cedar City Regional	CDC	Regional	CM
Heber	Heber City Municipal	36U	Regional	GA
Hurricane	Hurricane	1L8	Regional	GA non-NPIAS
Kanab	Kanab Municipal	KNB	Regional	GA
Logan	Logan-Cache	LGU	Regional	GA
Moab	Moab-Canyonlands Field	CNY	Regional	CM
Morgan	Morgan County	42U	Regional	GA non-NPIAS
Nephi	Nephi Municipal	U14	Regional	GA
Ogden	Ogden-Hinckley Municipal	OGD	Regional	RL
Price	Price-Carbon County	PUC	Regional	GA
Provo	Provo Municipal	PVU	Regional	GA
Richfield	Richfield Municipal	RIF	Regional	GA
Salt Lake City	Salt Lake City Muni 2	U42	Regional	RL
Spanish Fork	Spanish Fork-Springville	U77	Regional	GA
Tooele	Tooele Valley Airport	TVY	Regional	RL
Vernal	Vernal	VEL	Regional	CM
Community Airports				
Beaver	Beaver Municipal	U52	Community	GA
Blanding	Blanding Municipal	BDG	Community	GA
Bryce Canyon	Bryce Canyon	BCE	Community	CM
Delta	Delta Municipal	DTA	Community	GA
Eagle Mountain	Jake Garn	17U	Community	GA non-NPIAS
Escalante	Escalante Municipal	IL7	Community	GA
Fillmore	Fillmore	U19	Community	GA non-NPIAS
Green River	Green River	U34	Community	GA
Manti	Manti-Ephraim	41U	Community	GA
Milford	Milford Municipal	MLF	Community	GA
Monticello	Monticello	U43	Community	GA
Panguitch	Panguitch Municipal	U55	Community	GA
Parowan	Parowan	1L9	Community	GA
Roosevelt	Roosevelt Municipal	74V	Community	GA

Table 3-1, Continued
Initial Airport Role Summary

Associated City	Airport Name	FAA ID	UCASP Role	FAA Role
Local Airports				
Bluff	Bluff Airport	66V	Local	GA non-NPIAS
Duchesne	Duchesne Municipal	U69	Local	GA
Dutch John	Dutch John	33U	Local	GA non-NPIAS
Glen Canyon Natl. Rec. Area	Bullfrog Basin	U07	Local	GA non-NPIAS
Halls Crossing	Halls Crossing	U96	Local	GA
Hanksville	Hanksville	HVE	Local	GA
Huntington	Huntington Municipal	69V	Local	GA non-NPIAS
Junction	Junction	U13	Local	GA non-NPIAS
Loa	Wayne Wonderland	38U	Local	GA
Manila	Manila	40U	Local	GA non-NPIAS
Mount Pleasant	Mount Pleasant	43U	Local	GA non-NPIAS
Salina	Salina-Gunnison	44U	Local	GA non-NPIAS

PR – Primary Commercial Service, CM – Commercial Service, GA – General Aviation
Source: UDOA, Wilbur Smith Associates, 2006

Exhibit 3-2
UCASP Airport Roles
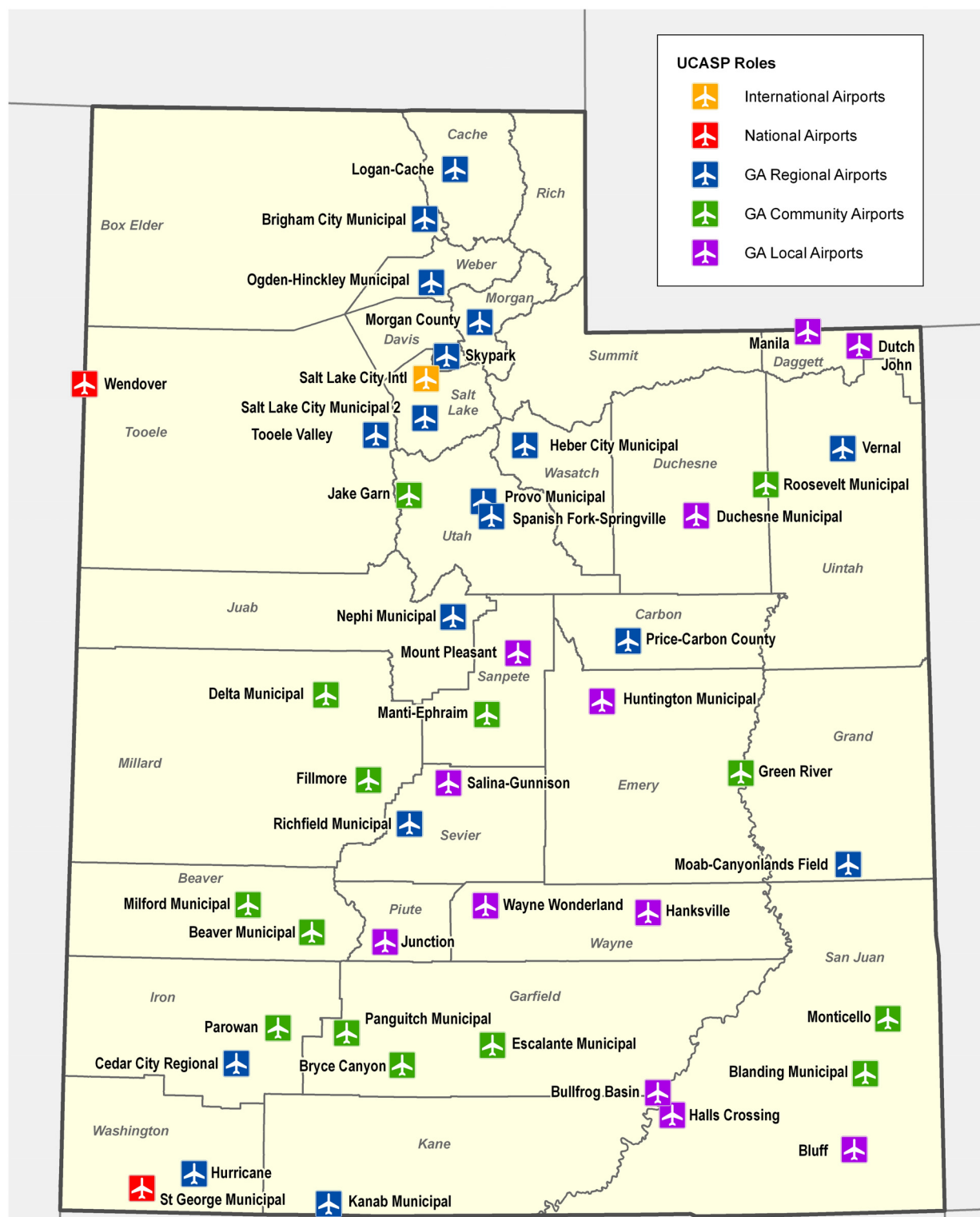
Source: UDOA, Wilbur Smith Associates, 2006

General Aviation Community – General Aviation Community (GA Community) airports serve a supplemental contributing role for the local economy. Community airports focus on providing aviation access for small business, recreational, and personal flying activities throughout Utah. These airports are located throughout the state to serve rural needs and provide another connection to the state's transportation infrastructure.

General Aviation Local – General Aviation Local (GA Local) airports play a limited role in contributing to the local economy. These airports are considered to have local importance, primarily serving recreational and personal flying activities.

In subsequent chapters, each airport will be analyzed to determine its role within the Utah Airport System. This includes identification of airports in close proximity to other airports that provide duplicate services or areas of the state where services are insufficient to meet demand. The identification of airports within a region where aviation services are duplicated may dictate moving an airport to a lower role. This subsequent process also evaluates if more advanced aviation services are needed to serve an area. This may indicate that a higher role is needed for a particular airport. An underserved area could indicate the need for a different category of airport, or possibly development of a new airport.

It is important to note this role analysis is based on a "snapshot in time" of present conditions and is only a starting point in Utah's system planning process. Based on analyses that are conducted in subsequent steps, some airports may be identified to serve a greater role in the future for the system to function at its highest level.

FACILITY AND SERVICE OBJECTIVES

Once system airports are grouped into roles, it is desirable to identify facilities and services that should be available at airports serving that role. Facility and service objectives delineated in this section are merely objectives. It is possible that airports included in, or recommended for, an increased role in later analyses may be unable to comply with certain facility and service objectives. An airport's inability to meet the facility and service objectives for its role does not necessarily preclude that airport from performing that role within the system. However, it is considered in the analysis of options to rectify system deficiencies. The objectives presented are minima, and airports with facilities exceeding the objectives meet the objective. Reduction or removal of facilities and services is not considered in this analysis.

Facility and service objectives were not developed for International Airports. At this time, only Salt Lake City International Airport is classified as International. UDOA will work with Salt Lake City International to define objectives based on the airport's current planning efforts to provide consistency between the UCASP, FAA planning guidelines, and capital development at Salt Lake City International Airport.

FAA's Airport Reference Code (ARC) System

In the ARC system, the FAA relates airport design criteria to the operational and physical characteristics of the most demanding aircraft, or design aircraft, intended to regularly operate at an airport. The ARC has two components related to the airport design aircraft. The first component, depicted by a letter, is the aircraft approach category; it is related to the aircraft approach speed. The second component, depicted by a Roman numeral, is the airplane design group; it relates to the airplane wingspan. Generally, the size and characteristics of an airport's runway and other facilities are related to aircraft approach speed, airplane wingspan, and designated or planned instrument approach visibility minimums. **Table 3-2** provides a list of common airplanes with their approach category and design group as specified by FAA standards.

Table 3-2
Aircraft Classification Standards

FAA Aircraft Approach Categories		
Approach Category	Approach Speed (Knots)	Typical Aircraft Type
A	Less than 91	Beech Bonanza, Cessna 150, Cessna 172
B	91 but less than 121	King Air, Citation I & II, Falcon 50
C	121 but less than 141	Lear 25, Gulfstream III, B-727, B-737, B-757
D	141 but less than 166	Gulfstream II and IV, B-747, B-777

FAA Wingspan Design Groups		
Design Group	Wingspan (Feet)	Typical Aircraft Type
I	Less than 49	Beech Baron 58, Cessna 150, Cessna 172
II	49 but less than 79	Beech King Air C-90, Gulfstream I, Falcon 50
III	79 but less than 118	B-727, B737, DC-9
IV	118 but les than 171	A-300, B-757, B-767, L-1011, DC-10
V	171 but less than 197	B-747, B-777
VI	197 but less than 262	Lockheed C-5A

Source: Federal Aviation Administration

Table 3-3 identifies the minimum facility and service objectives for each of the other four airport roles.

Table 3-3
Facility and Service Objectives

NATIONAL AIRPORTS	
AIRPORT CRITERIA	**MINIMUM OBJECTIVES**
ARC:	C-III or Design Aircraft
RUNWAY LENGTH:	Accommodate 75% of large aircraft at 90% useful load
RUNWAY WIDTH:	To Meet ARC
RUNWAY STRENGTH:	Single-wheel gear – 60,000 lbs.; equivalent for dual wheel
TAXIWAY:	Full Parallel
NAVIGATIONAL AID:	Precision Approach
VISUAL AIDS:	MALSR, GVGIs
LIGHTING:	MIRL, Beacon, Windsock
WEATHER:	Automated Weather Reporting
SERVICES:	Phone Restrooms FBO – Full service Maintenance facilities & hangar 5,000 sq. ft. On-site rental car Perimeter fencing, controlled access
FACILITIES:	Modern Terminal Hangars – 75% of based fleet & 25% of overnight aircraft Apron – 25% of based fleet & 75% for transient Auto Parking – Per master plan
GENERAL AVIATION REGIONAL AIRPORTS	
AIRPORT CRITERIA	**MINIMUM OBJECTIVES**
ARC:	C-II or Greater
RUNWAY LENGTH:	Accommodate 75% of large aircraft at 60% useful load
RUNWAY WIDTH:	To Meet ARC
RUNWAY STRENGTH:	Single-wheel gear – 30,000 lbs., equivalent for dual wheel
TAXIWAY:	Partial Parallel
NAVIGATIONAL AIDS:	Non-Precision Straight-In Approach
VISUAL AIDS:	GVGIs, REILs
LIGHTING:	MIRL, Beacon, Windsock
WEATHER:	Automated Weather
SERVICES:	Phone Restrooms FBO – Limited service Maintenance facilities – Limited service On-site courtesy car Perimeter fencing
FACILITIES:	Terminal with appropriate facilities Hangars – 60% of based fleet & 25% of overnight aircraft Apron – 40% of based fleet & 50% for transient Auto Parking – Equal to 33% of based aircraft Food – Limited service restaurant or vending service

GENERAL AVIATION COMMUNITY AIRPORTS	
AIRPORT CRITERIA	**MINIMUM OBJECTIVES**
ARC:	B-II or Greater
RUNWAY LENGTH:	Accommodate 75% of small airplanes
RUNWAY WIDTH:	Minimum 75'
RUNWAY STRENGTH:	Single-wheel gear – 12,500 lbs.
TAXIWAY:	Turnarounds & Connectors
NAVIGATIONAL AIDS:	Non-Precision Approach
VISUAL AIDS:	GVGIs, REILs
LIGHTING:	MIRL, Beacon, Windsock
SERVICES:	Phone Restrooms FBO – Limited service On-site courtesy car Perimeter fencing
FACILITIES:	Hangars – 50% of based fleet & 25% of overnight aircraft Apron – 50% of based fleet & 25% for transient Auto Parking – Equal to number of based aircraft Food – vending service Pilots Lounge
GENERAL AVIATION LOCAL AIRPORTS	
AIRPORT CRITERIA	**MINIMUM OBJECTIVES**
ARC:	A-I
RUNWAY LENGTH:	Maintain Existing
RUNWAY WIDTH:	Maintain Existing
RUNWAY STRENGTH:	Single-wheel gear – 12,500 lbs.
TAXIWAY:	Connector and/or Turnarounds
LIGHTING:	Reflectors or LIRL, Beacon, Windsock
SERVICES:	Phone Restrooms Perimeter fencing
FACILITIES:	Auto Parking Pilots Lounge

Source: UDOA, Wilbur Smith Associates, 2006

SUMMARY

This chapter has set forth the initial roles that are used in subsequent analyses to evaluate the adequacy of Utah's Airport System. With the airport roles and the facility and service objectives identified, the ability of the System to meet the needs of Utah is analyzed in the next chapter.